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# 805

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# TESTIONS & ANSWERS ON EQUINE INFECTIOUS ANEMIA (Swamp fever)

U.S. Department of Agriculture  
Program Aid No. 805

Purchase or assemble only AGID  
(Coggins) test negative animals.



# Questions & Answers on Equine Infectious Anemia (Swamp Fever)

Outbreaks of equine infectious anemia have created renewed interest in this disease among owners of horses, mules, and asses in the United States.

The disease, which weakens and sometimes kills infected animals, spread readily. It may be difficult to diagnose because it can take many forms, and because it resembles other fever-producing diseases. The introduction of a new diagnostic tool, the Coggins test, has placed new emphasis on control of the disease.

This Program Aid answers frequently asked questions about the disease.

## **What is equine infectious anemia?**

It is a disease of horses, mules, and asses that produces anemia, intermittent fever, and severe loss of weight. Some infected animals die.

## **Does it have other names?**

Yes. Equine infectious anemia is also called swamp fever, EIA, malarial fever, mountain fever, and slow fever.

## **What animals are affected?**

Only members of the equine family—horses, mules, and asses—are susceptible to natural exposure.

## **Does it kill many animals?**

Death rates vary. ~~Equine infectious anemia may kill from 30 to 75 percent of the animals infected with the disease.~~ Death rates are usually higher when the disease is introduced into a new area. Broncho-pneumonia, which frequently follows infectious anemia, may be a direct cause of death.

## **Where is it found?**

Equine infectious anemia has been reported in all sections of the United States and in many other parts of the world. The disease may occur wherever members of the equine family are kept. New outbreaks are usually the severe (acute) form. In areas where the disease is well established, the inapparent (carrier) form is more common.

## **What causes the disease?**

Infectious anemia is caused by a virus found in blood and tissues of infected animals. This virus remains in the blood of animals that recover—and in the blood of carrier animals—as long as they live. Infected animals shed the virus in discharges from eyes and nose, saliva, urine, manure, mare's milk, and semen.

## **What are the signs?**

The animal with equine infectious anemia has a sudden rise in temperature, from normal 100° F. to 105° F. or higher. Fever attacks may be intermittent or continuous. The animal may sweat profusely. Breathing is rapid. The animal appears depressed. Usually, it loses weight although it continues to eat. Eyes are bloodshot, with a slight watery discharge. Urination is frequent; diarrhea develops in severe cases. Swellings filled with watery liquid may form on legs (called stocking up) and lower parts of the body (called dropsy). Weakness causes the animal to develop a wobbly or rolling gait; sometimes the hind quarters are paralyzed. As the disease progresses, anemia develops. Mucous membranes are pale or yellowish; pulse weakens. Heart action becomes irregular.

## **Do all infected animals show these signs?**

No. Visibly affected animals may show only a few of the signs above. Some animals with infectious anemia virus in their blood never show any signs of disease.



## **How long does it take to develop?**

Horses, mules, and asses normally develop infectious anemia 2 to 4 weeks after they are exposed. However, signs may appear as long as 2 months after natural exposure.

## **How long does the disease last?**

In the acute form, attacks of fever usually last 3 to 5 days. Occasionally, the first attack is fatal; more often, infected animals have several severe attacks before they die.

In the chronic form, animals often appear to recover—except for loss of weight and condition. They may continue to live many years. Although the disease recurs, intervals between attacks, are longer and signs are less severe than in the acute form. Animals may eventually die during or following an attack.

In the inapparent form, infected animals continue to carry the virus in their blood for as long as they live. These carriers of equine infectious anemia do not show signs of the disease. However, the inapparent form may change to acute or chronic forms after hard work, other diseases, or severe stress.

## **How can you find out if an animal has infectious anemia?**

Contact your veterinarian. He can collect a blood sample and send it to an approved laboratory for the agar-gel immunodiffusion (Coggins) test. This test is an excellent diagnostic tool.

## **When should the test be used?**

When diagnostic problems occur, the animal should be tested. Also, a negative Coggins test may be required for entry into several States and certain foreign countries. In many instances, breeding farms, horse auctions, and racetracks require a negative Coggins test.

## **Is infectious anemia sometimes mistaken for other diseases?**

Yes. The acute form of equine infectious anemia



can be confused with anthrax, influenza, equine encephalitis, horse tick fever (equine piroplasmosis), and other fever-producing diseases.

### **How does it spread?**

Equine infectious anemia is spread to "clean" horses, mules, and asses by—

- **Unsterilized instruments—knives, syringes, tattooing needles, bleeding needles—previously used on infected animals.**
- Blood transfusions from infected animals.
- Tack—bridles, saddles, blankets, harness, brushes, curry combs, spurs, whips, bandages—previously used on infected animals. Virus from contaminated equipment can enter the animal's body through breaks in the skin.
- Virus-carrying insects—biting flies, biting lice, and mosquitoes.
- Long, close contact with infected animals.

### **Is there a vaccine to protect animals against infectious anemia?**

No.

### **How can animals be treated?**

No treatment is effective against the disease.

### **Can animals be cured of infectious anemia?**

No.

### **Can the virus be killed?**

Yes. Boiling for 15 minutes will sterilize boilable equipment that otherwise might spread the disease.

### **What can you do to help control the disease?**

Animal-disease-control officials recommend that owners of horses, mules, and asses take the following precautions against equine infectious anemia:

- Use disposable syringes and needles. Follow the rule: "One horse—one needle."



- Sterilize other instruments that you use in working with animals. Clean all instruments thoroughly after each use; then boil 15 minutes to sterilize. This will prevent the spread of disease by knives, needles, and dental and surgical equipment.
- Provide separate tack for each animal. If bridles, saddles, harness, brushes, spurs, whips, curry combs, or bandages must be interchanged, clean each piece thoroughly before reuse. For cleaning, use a 2-percent trisodium phosphate solution; leather items should then be conditioned by using saddle soap or neat's-foot-oil.
- Control biting flies, biting lice, and mosquitoes in stables and pastures. Your county agricultural agent or veterinarian can give you information about approved insecticides and other insect-control measures.
- Use the Coggins test when diagnostic problems occur or to meet shipping requirements.
- Do not breed mares and stallions that you suspect of being infected with infectious anemia.
- Keep stables and immediate surroundings clean and sanitary at all times. Remove manure and debris promptly. Make sure the area is well drained.
- Isolate all new horses, mules, and asses brought to your premises. Have temperatures checked daily; keep new animals under observation 60 days before putting them with other animals.
- At horse shows, county fairs, racetracks, and other places where many animals are brought together, make sure your animals are quartered in separate, well-ventilated stalls. Keep stalls clean and free from flies. Give feed and water only in containers reserved for an individual animal.
- Cooperate with States that require examinations on entry for horses, mules, and asses.

## **Veterinary Services**

**Animal and Plant Health Inspection Service  
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